MSD

June 17, 2005

Mr. Femi Akindele
Remedial Project Manager
Kentucky/Tennessee Section
U.S. Environmental Protection Agency
Region IV
61 Forsyth Street
Atlanta, GA 30303

Re: Result of Air Quality Monitoring - FY 05, Fourth Quarter (FY05-4Q), Lees Lane Superfund Site, Jefferson County, Kentucky, Administrative Order on Consent, USEPA Docket No-91-32-C

Dear Mr. Akindele

In accordance with paragraph 11, under Reporting Requirements, of the subject Consent Order and Attachment 1, Operation and Maintenance Plan For Post-Removal Site Control at the Lee's Lane Landfill Site. Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following items, prepared by URS Corporation, 1600 Perimeter Park Drive, Suite 100, Morrisville, North Carolina 27560 and received by MSD on June 14, 2005.

1. URS Corporation letter dated June 1, 2005, 3 pages.
2. Figure 1, Lees' Lane Landfill, Sampling Locations, 1 page.
3. Table 1, TO-15 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: April 18, 2005, 1 page.
4. Table 2, On-Site Meteorological Data, Sampling date, April 18, 2005, 1 page.
5. Table 3, TO-15 Data Summary for Gas Monitoring Well Samples at the Lees' Lane Landfill, Sampling date: April 18, 2005, 1 page.

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street Louisville, Kentucky 40203-1911 502-540-6000 www.msdlouky.org

Please advise if you have any questions concerning the attached information.

Sincerely,

Richard H. Watkins, Sr.
Maintenance Assistant

RHW/rw
Lees-05-4Qtr

Enc.

cc: Kentucky National Resource Environment Protection Cabinet
Mr. Ken C. Logsdon, Division of Waste Management
H. J. Schardein, Executive Director
Lees Lane File

URS

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June 1, 2005

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, KY 40211

Dear Dan:

Enclosed is the summary analytical report for the ambient air and gas monitoring well samples collected at the Lee's Lane Landfill site on April 18 and April 20, 2004 (Quarter 37). During the sampling event on April 18, 2005, it was discovered that three of the canisters did not have an adequate vacuum pressure and were thus not suitable for sampling. Therefore, sampling was performed on two days – April 18 and April 20, 2005. All six ambient samples, along with G1, G3, G4, and a Field Blank were taken on April 18, 2005 (Day 1). G2, G5L, G5R, and another Field Blank were taken on April 20, 2005 (Day 2).

A map of the site, labeled with the sample collection locations for your reference, is shown in Figure 1. Table 1 is a tabular summary of the ambient samples with the primary analytes required for submission to EPA. All ambient air samples indicate low levels of the primary analytes at a similar level compared to the past reporting period. However, there were a few differences in the non-primary analytes: Ambient concentrations of acetylene were much lower than in the previous sampling event (0.6-1.2 ppb in April 2005 as compared to 11-24 ppb in September 2004). Ambient concentrations of trichlorofluoromethane were much higher than in the previous sampling event (3.2-7.0 ppb in April 2005 as compared to 0.3-0.4 ppb in September 2004). Additionally, chloroethane, which was not measured above the detection limit in September 2004, was measured at A2 (2.58 ppb) and R3 (1.2 ppb).

Quality control data from the laboratory replicates are of suitable project quality. Some notations on data quality are in order. For instances, Day 1 field blank levels of carbon tetrachloride exceed those of all six ambient samples and two gas well samples. Day 2 field blank levels of methylene chloride exceed are near the measured gas well samples.

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The sampling locations were chosen based on a combination of prevailing on-site meteorology and accessible sites in the adjacent residential neighborhood per the standard sampling protocol. The meteorological conditions were moderate to warm (55-81^{O}F) with wind speeds ranging from 3.5 to 12.7 mph during the sampling day. Because meteorological data were not available for the site, the information displayed in Table 2 was obtained from the Louisville International Airport (Standiford Field) National Weather Service Station. The ambient air samples were collected in Summa canisters positioned 3-5 feet above ground level, integrated over an approximate 9-hour collection period.

The methane analysis was performed by GC/FID using a separate analytical system from the TO-15 analysis employed at STL in Austin. The TO-15 analytical methodology using Gas Chromatography/Mass Spectrometry (GC/MS) was employed. Samples were handled with standard laboratory chain-of-custody procedures. Sample canisters and flow controllers were cleaned and blanked using method TO-12 for total nonmethane hydrocarbons prior to field deployment. All of the samples were successfully collected and analyzed for methane and the TO-15 target analytes. Quality control parameters of precision (repeatability) and spiking of surrogate compounds meet internal URS and project-required specifications.

The reliability of this data set can be characterized as good, based on the repeatability (analytical precision), surrogate spike recoveries, blank levels and the relatively few number of unresolved interfering peaks, in the sample chromatograms. The April 18, 2005 field blank canister reported positive hits for carbon tetrachloride (0.211 ppb) and methane (0.385 ppm). The April 20, 2005 field blank canister reported a positive hit for methylene chloride (0.233 ppb). These concentrations are similar to those reported for the September 2004 sampling period. The reported results have not been blank corrected in attached tables per our standard project procedure.

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. The gas monitoring wells were screened with an organic vapor analyzer (OVA) to test for the presence of methane prior to field sample collection. Methane was detected with the OVA in Well G1, at levels ranging from 0.8% to 6.0%. Analytical results from gas wells G2, G3, G5L, and G5R were similar to those reported from the previous sampling event.

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Gas well G1 contained concentrations of analytes that were as 2x - 3x higher than the concentrations measured in September 2004. In specific, gas well G1 contained concentrations of benzene (50.4 ppb), halocarbon 114 (154 ppb), methane (170,000 ppm), propylene (765 ppb), and tetrachloroethene (60.8 ppb). (Note: Methane in gas well G1 was initially analyzed by GC/FID, which resulted in a concentration that exceeded the calibration range. Therefore, methane was reanalyzed by ASTM D1946-90, which resulted in the reading of 17.0%, or 170,000 ppm.).

Gas well G4 contained concentrations of many analytes that were as high as four orders of magnitude greater than the concentrations measured in September 2004. In particular, gas well G4 concentrations of 1,1,1-trichloroethane (142 ppb), carbon tetrachloride (1,960 ppb), chloroform (56.1 ppb), halocarbon 114 (45 ppb), methane (1,130 ppm), and tetrachloroethene (30.1 ppb) were especially high compared to the concentrations in the previous sampling event.

URS appreciates the opportunity to assist your staff with this project. Please advise me at (919) 461-1242 if you have any questions.

Sincerely,

Robert F. Jongleux
Project Manager

Enclosure

cc: Scott Duthie, URS/LOU
Project File/Task 37

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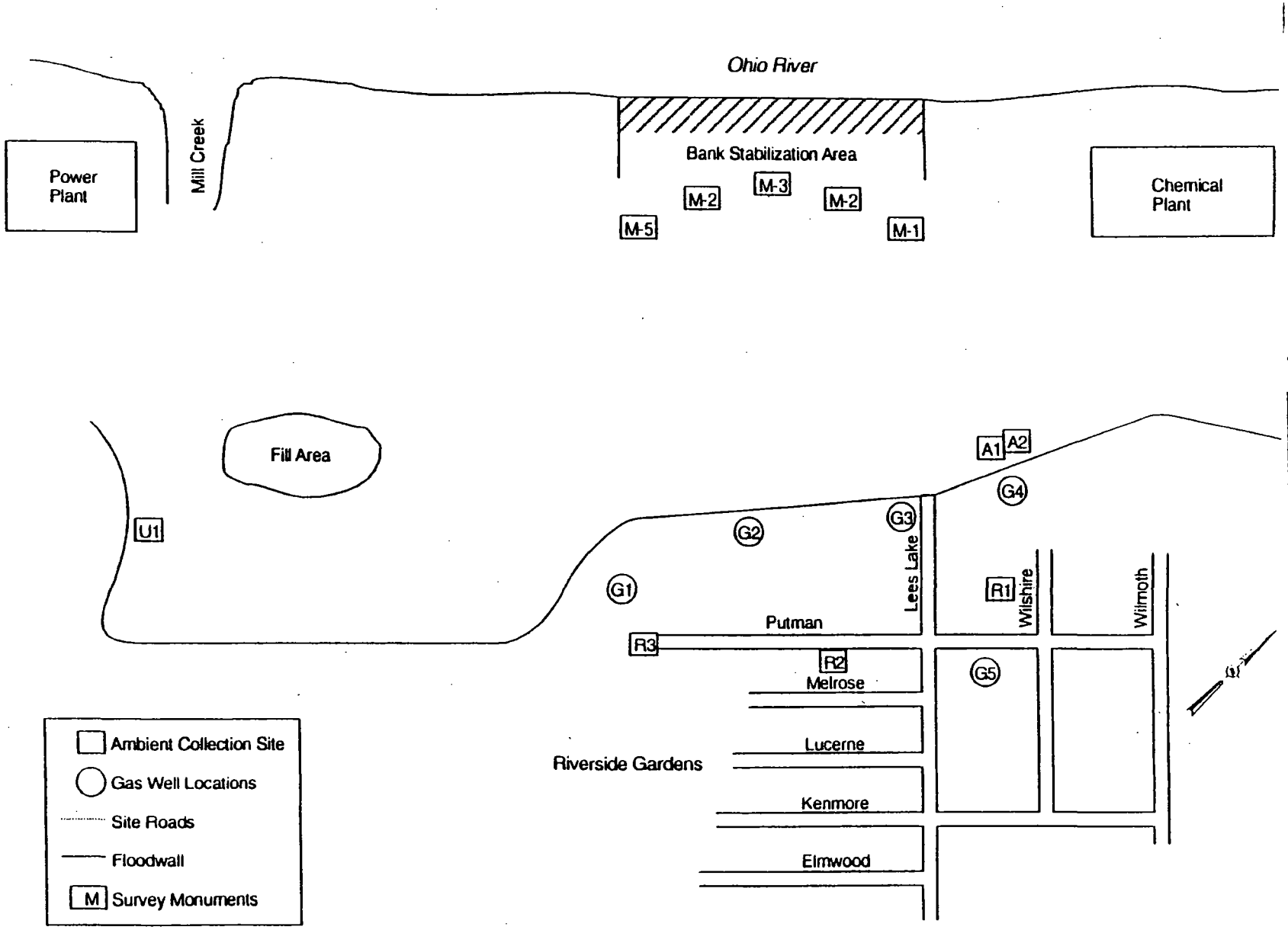

Figure 1. Lees Lane Landfill Sampling Locations

TABLE 1

TO-15 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEE'S LANE LANDFILL SAMPLING DATE: 18 APRIL 2005

	Ambient Air Samples					
Sample ID	U1	A1	A2	R1	R2	R3
Canister ID	RA0977	RA2100	RA2031	RA2025	RA2034	RA2029
Dilution Factor	3.35	3.13	2.90	2.85	2.79	3.01
Location	Upwind	On-site	On-site(dup)	Residential	Residential	Residential
Veriflow ID	A218796	A218997	A134120	A218961	A155246	A218962
Compound (ppbV)						
Benzene	ND	ND	0.330	0.335	0.308	0.266
Methylene chloride	0.236	ND	1.110	0.226	0.330	0.728
Toluene	1.030	0.244	3.190	1.250	1.180	2.050
Vinyl chloride	ND	ND	ND	ND	ND	ND
Xylene (Total)	0.145	ND	0.398	0.367	0.211	0.233
Methane (ppmV)	7.7	7.5	6.9	6.8	6.9	6.0

ND = Non Detect

TABLE 2

LOCAL METEOROLOGICAL DATA
AMBIENT AIR SAMPLES
SAMPLING DATE: 18 APRIL 2005

Time	Barometric Pressure (in Hg)	Temperature (F)	Dewpoint (F)	Wind Direction (from)	Wind Speed (mph)	Observation
7:56	30.20	55.0	46.9	SSE	5.8	Scattered Clouds
8:56	30.21	59.0	48.9	SSE	3.5	Scattered Clouds
9:56	30.21	66.0	48.0	SSW	4.6	Scattered Clouds
10:56	30.20	72.0	48.9	SW	8.1	Scattered Clouds
12:01	30.20	73.4	51.8	SW	8.1	Mostly Cloudy
12:56	30.18	77.0	48.0	WSW	9.2	Mostly Cloudy
13:56	30.16	79.0	48.0	SW	10.4	Mostly Cloudy
14:56	30.15	79.0	46.9	WSW	12.7	Mostly Cloudy
15:56	30.12	79.0	46.9	West	10.4	Partly Cloudy
16:56	30.10	81.0	48.0	SSW	10.4	Scattered Clouds
17:56	30.09	80.1	46.9	SSW	12.7	Scattered Clouds

Source: National Weather Service, Louisville, Ky.

TABLE 3

TO-15 DATA SUMMARY FOR GAS MONITORING WELL SAMPLES AT THE LEE'S LANE LANDFILL SAMPLING DATE: APRIL 2005

	Well Samples							
Sample ID	G1	G2	G3	G4	G5-L	G5-R	BLANK #1	BLANK #2
Canister ID	HL0908	HL0979	RA0985	RA2028	RA2401	RA2271	RA2036	HL0981
Dilution Factor	2.69	2.65	2.66	2.72	2.68	2.65	2.60	2.56
Orifice	-	2	G-3	G-4	G-5L	G-5R	-	-
Sampling Date	4/18/2005	4/20/2005	4/18/2005	4/18/2005	4/20/2005	4/20/2005	4/18/2005	4/20/2005
Compound (ppbV)								
Benzene	50.400	0.095	0.528	ND	0.520	ND	ND	ND
Methylene chloride	0.676	0.222	0.449	ND	0.131	ND	ND	0.233
Toluene	1.080	0.120	3.440	0.075	1.760	0.065	ND	ND
Vinyl chloride	47	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	ND	ND	0.680	ND	0.794	ND	ND	ND
Methane (ppmV)	170,000	5.1	7.5	1130.0	5.8	5.4	0.4	ND

ND = Non-Detect